

Competitive Benchmark - 6Gb RAID

ATTO EXPRESSSAS R680 6GB SAS/SATA RAID ADAPTER VS. POPULAR 6GB SAS/SATA ADAPTER

OVERVIEW

Intel's Iometer server I/O performance storage measurement tool was used to capture the data presented in this testing. Both 6Gb/sec SAS/SATA RAID adapters were tested in the PCIe 2.0 slot of the host running MS Windows 7 x64 with 6GB DDR3 RAM. The storage targets were connected using an external JBOD array through an Astex 6Gb expander with 8 PHYs and containing 16 Western Digital 6Gb/s 1TB SATA disk drives. All tests were run against raw, unformatted disks. Adapter performance was measured at multiple block transfer sizes to replicate high transactional storage applications for reads and writes, respectively.

RESULTS

Comparative performance benchmark data (MB/sec):

	Read		Write	
	ATTO R680	Competitor	ATTO R680	Competitor
64K	938.0	707.0	793.9	843.0
128K	1006.7	539.9	899.6	1093.7
256K	1224.3	819.4	1147.2	1343.6
512K	1334.0	593.4	1224.7	1325.2
1M	1460.3	666.6	1276.6	1314.0
2M	1616.8	745.6	1343.1	1299.8
4M	1746.4	1148.3	1378.0	1286.6
8M	1831.0	1649.0	1406.7	1270.9

CONFIGURATION

ATTO EXPRESSSAS R680 RAID ADAPTER

- 6Gb/s SAS/SATA RAID with 8 external ports
- x8 PCIe 2.0

COMPETITIVE SAS/SATA RAID ADAPTER

- 6Gb/s SAS/SATA RAID with 8 external ports
- x8 PCIe 2.0

HOST CONFIGURATION

- Intel E5506 Xeon 2.12 GHz, 6GB DDR3 RAM
- PCIe 2.0 x8
- Windows 7 x64

STORAGE CONFIGURATION

- 16 Western Digital 1TB SATA 6Gb/s HDD
- RAID 5 Configuration
- ATTO and Competitive adapter interleave set to 256K

BENCHMARK APPLICATION

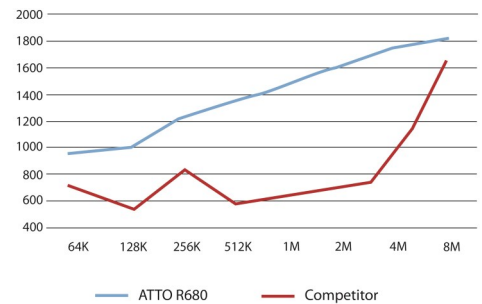
- Intel Iometer server I/O performance storage measurement tool
- 100% sequential at 64KB to 8MB Reads and Writes at a queue depth of 2

SUMMARY AND CONCLUSIONS

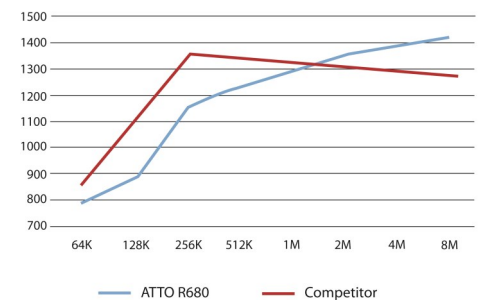
The ExpressSAS R680 provides up to 50% faster read performance compared to a popular competitor's 6Gb SAS/SATA RAID adapter. Additionally, the ATTO R680 delivers excellent write performance, especially at larger block transfer sizes. It allows users to achieve the highest I/O and data throughput for advanced video, backup and transactional database applications.

The ATTO ExpressSAS 6Gb/s SAS/SATA RAID adapter family allows users to instantly protect their critical data while enhancing performance. ATTO designs ExpressSAS RAID adapters to maintain full performance in degraded mode and to minimize downtime with 50% faster rebuilds, limiting exposure to a second drive failure. Exclusive latency management features like Advanced Data Streaming (ADS™) Technology and DriveAssure™ minimize data transfer

HDD Reads (MB/sec)



HDD Writes (MB/sec)



interruptions to ensure the highest level of consistent performance.

These differentiating capabilities make ATTO the premier choice for high-performance host-based RAID connectivity.